SOURCES OF POINT SOURCE LOADINGS THROUGH CLASS V WELLS TO GROUND WATER

What does the indicator tell us?

This indicator characterizes industrial wastewater discharges to freshwater aquifers through shallow disposal wells, particularly septic systems. EPA considers septic systems to be Class V injection wells, subject to regulatory control, unless they are small and receive only sanitary wastes. Recent studies suggest that probably 10 percent of septic systems in the United States release as much as 4 million pounds of industrial waste each year—enough to contaminate trillions of gallons of drinking water. By 2005, EPA plans to reduce the number of pounds of ethylene glycol and other industrial wastes discharged through septic systems to zero.
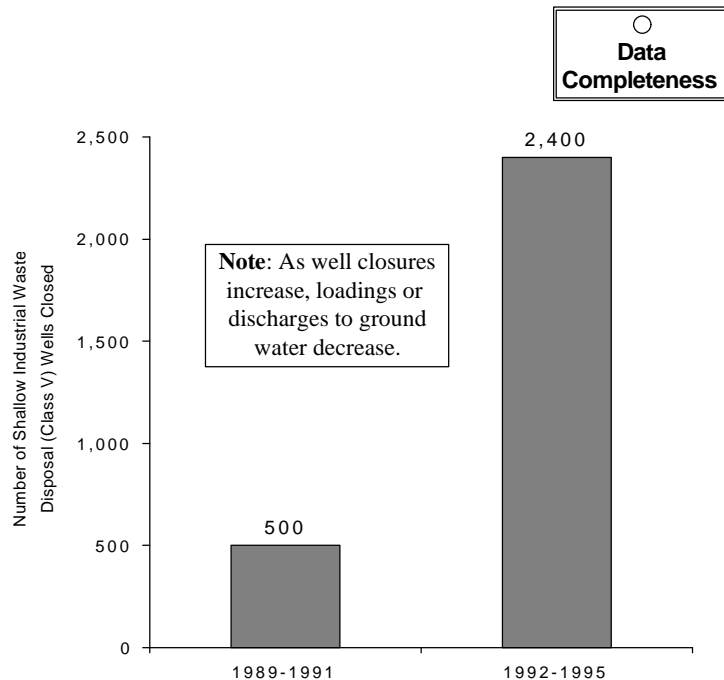
How will the indicator be used to track progress?

This indicator serves as a barometer of the effectiveness of a comprehensive Class V strategy initiated by EPA in 1995. EPA will determine the reduction in pollutant loadings from the number of septic systems that are "closed," that is, no longer injecting any industrial fluids to the subsurface. EPA will use Class V data from annual reports provided by EPA-approved state Underground Injection Control (UIC) programs. EPA will also conduct a special study to verify the number of systems reported closed, particularly in community wellhead protection areas.

What is being done to improve the indicator?

Septic systems are designed to treat solely sanitary wastes. However, some manufacturing and commercial businesses place their industrial wastes directly into the ground through a dry hole or cesspool or direct them into their septic tanks. Either way, the untreated waste might eventually find its way to a

INDICATOR 16b: Sources of Point Source Loadings Through Class V Wells to Ground Water

Data Completeness

Note: As well closures increase, loadings or discharges to ground water decrease.

Number of Shallow Industrial Waste Disposal (Class V) Wells Closed

1989-1991: 500
1992-1995: 2,400

Source: EPA Office of Ground Water and Drinking Water, 1995

Proposed Milestone: By 2005, wellhead protection areas and vulnerable ground water resources will no longer receive industrial wastewater discharges from septic systems.

water-table aquifer. Contamination of freshwater aquifers can result in serious and costly consequences to public health and the environment, including onset of waterborne disease, expensive ground water remediation, loss of private and public domestic drinking water supplies, and degradation of aquatic ecosystems, wetlands, watersheds, and coastal zones.

Although the misuse of septic systems is a nationwide concern, the threat is not immediately obvious because it occurs, unseen, in the subsurface. The biggest problem is that Class V data on the actual volume of industrial waste released to ground water is currently speculative. For example, no one knows how many septic tanks are being misused. The results presented by the Class V indicator should be interpreted with caution until the data quality can be improved. Future EPA toxic release reports will distinguish between classes of injection wells. Currently, Class V waste release data are extrapolated from random sampling of typical high-risk wells. Class V data should improve as EPA's strategy for the comprehensive management of Class V wells proceeds and public awareness develops.

What is being done to improve conditions measured by the indicator?

EPA has documented Class V contamination of drinking water supplies across the United States (e.g., Colorado, Florida, Montana, New Hampshire, New York, Oregon, Pennsylvania, Virginia, and Washington). The EPA UIC program works with other federal agencies and state, tribal, and local governments to adequately manage this major source of pollution as part of source water protection programs, which will be developed for 30,000 community water supplies by the year 2005. This strategy recognizes that to reduce new high-risk injection practices, EPA will have to (1) raise public awareness through education and outreach; (2) provide technical assistance; (3) forge federal, state, and local government partnerships; (4) enlist the involvement of

industry; and (5) support voluntary compliance initiatives. EPA will rely less on regulation, penalties, and other traditional approaches to permitting and enforcement, which are inadequate to deal with large numbers of shallow wastewater disposal wells with a potential to contaminate underground sources of drinking water.

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